Ferris Road Bridge
Spanning the Pine River in Section 32
Sumner vicinity
Gratiot County
Michigan

HAER No. MI-20

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

Historic American Engineering Record
Mid-Atlantic Regional Office
National Park Service
U.S. Department of the Interior
Philadelphia, Pennsylvania 19106

HISTORIC AMERICAN ENGINEERING RECORD

Ferris Road Bridge

HAER No. MI-20

Location: Spanning the Pine River in Section 32, Sumner vicinity, Gratiot County, Michigan

UTM: 16.677305.4796024
Quad: Sumner, Michigan

Date of Construction: circa 1910

Present Owner: Gratiot County Road Commission
920 E. Center Street
Ithaca, Michigan 48847

Present Use: Vehicular bridge

Significance: The Ferris Road Bridge is one of the few riveted, connected Warren truss highway bridges with double angle truss members surviving in Michigan. It was listed in the National Register of Historic Places in 1986.

Project Information: This documentation was undertaken in April 1987 in accordance with the Memorandum of Agreement by the Gratiot County Road Commission as a mitigative measure prior to demolition of the bridge.

Fred Walkington
Manager
Gratiot County Road Commission
Ithaca, Michigan

The Ferris Road Bridge, over the Pine River, is located in Section 21 of Sumner Township, Gratiot County, Michigan. Ferris Road is a north-south road situated on a 66-foot-wide right-of-way. Washington Road intersects Ferris Road approximately 2,550 feet south of the bridge. St. Charles Road intersects Ferris Road approximately 2,700 feet north of the bridge. Ferris Road is the principal road used by the residents of Sumner when they desire to travel south across the Pine River. Not only does the bridge provide access to the south side of the Pine River for the residents of Sumner, but it also is used by farmers on both sides of the river for access to markets and fields. The Ferris Road Bridge is typical of the many "farm to market" bridges built during the late 1800s and early 1900s in the rural areas of Michigan. The bridge was designed to accommodate early motorized farm vehicles. No structural changes were made to the Ferris Road Bridge.

The original plans for the bridge were destroyed. The bridge does not have a nameplate. "Carnegie USA" is stamped on all truss angles. An inquiry went out to the American Institute for Steel Construction (AISC) for the approximate date the Carnegie Company started rolling steel angles. It appears that the bridge was constructed in 1910 or shortly thereafter.

The following is a brief description of the Ferris Road Bridge over the Pine River:

* The bridge is a single span steel Warren truss with riveted connections. The total length of the bridge is 90 feet. The truss members ar all double angles.

* The width of the bridge is 21.5 feet. The clear width is 20 feet.

* A single angle lattice type rail runs inside each truss. The lattice rail is attached to the vertical truss members.

* The bridge deck is a concrete jack arch. The steel stringers in the arch consist of eight 12-inch-wide flange (WF) beams weighing 27 pounds per foot of beam.

* The bridge abutments are concrete.

The Ferris Road Bridge is typical of most bridges built in southern Michigan around the late 19th and early 20th centuries. Because the truss superstructure was relatively lightweight, it was fabricated at a steel fabrication plant and shipped by rail to the job site. The contractor constructed the substructure units, and then assembled and erected the steel truss. During its lifetime, no alterations were made to the Ferris Road Bridge.